

Rain Gardens

... absorb water, reduce runoff, prevent flooding

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What are rain gardens?

Rain gardens are depressional areas landscaped with perennial flowers and native vegetation that soak up rainwater. They are strategically located to capture runoff from impervious surfaces, such as roofs and streets. Rain gardens fill with a few inches of water after a storm and then water filters into the ground, rather than running off to a storm drain.

Why are rain gardens important?

As cities and suburbs grow, increased storm water runoff from impervious surfaces becomes a problem. As more impervious surfaces are added to our communities, it is more important than ever to help rainwater infiltrate. This protects water quality and reduces storm water runoff.

Storm water runoff from developed areas increases flooding potential and carries pollutants from streets, parking lots and lawns into local streams and lakes. Rain gardens can absorb most rainfall events.

Designing and Planting

Designing and planting a rain garden is very similar to creating other perennial gardens, with a few of the following exceptions:

Location

Rain gardens must be located to intercept runoff from impervious areas. They can be placed anywhere good soils with adequate percolation rates exist. It is best to keep rain gardens away from building foundations, utilities, and septic systems.

Size

Rain gardens are typically 5 to 10 percent the size of the impervious surface generating the runoff entering the garden. Measure the square footage of the impervious area (length x width); then multiply this by 0.07 (7 percent).

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Photo courtesy of Fred Rocumaldi

This rain garden is strategically placed to capture runoff from the lawn and street.

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Determine a length and width of the rain garden that best fits the site. For example, a 2,000 sq./ft. roof, when multiplied by 7 percent, would call for a rain garden 140 sq./ft. in size, or 14' long by 10' wide.

Garden Depth

A typical rain garden is between four and eight inches deep. A rain garden less than four inches deep will need too much surface area to provide enough water storage to infiltrate larger storms. Storm water runoff should spread evenly across the entire rain garden, to increase the opportunity for infiltration.

Soil Amendments

To prepare for a rain garden, remove soil to create a depressional area. Blend in soil, sand, and compost mixture to enhance infiltration.

Plant Selection

While rain gardens are a highly functional way to help protect water quality, they can also be an attractive part of your yard and neighborhood. Choose native plants based on site considerations for light, moisture, and soil. Vary plant structure, height, and flower color for seasonal appeal and butterfly habitat. Mowed grass borders are recommended around the garden.

Young plants, or plugs, are best for rain gardens because they are easier to establish and maintain. When laying plants out, randomly clump individual species in groups of 3 to 5 plants to provide bolder color. Be sure to repeat these individual groupings to create repetition and cohesion in a planting. It is a good idea to place plant labels next to each individual grouping. This will help identify the young native plants from weeds as you maintain the garden.

It is important to water rain gardens regularly throughout the first season. Once established, they will thrive without additional watering. A shredded wood mulch is an important part of a rain garden. Mulch helps retain moisture and discourages weed seeds from germinating.

Low Impact Development (LID)

A rain garden is an example of the low impact development (LID) approach to storm water management. Traditionally, storm water management has involved the rapid conveyance of water via storm sewers to surface waters. Low impact development is a different approach that retains and infiltrates rainfall on-site. The LID approach emphasizes site design and planning techniques that mimic the natural infiltration-based, groundwater-driven hydrology of our historic landscape.



Native landscaping adds color, structure, and diversity to the landscape and provides habitat for butterflies.

More Information about Rain Gardens

Find additional information about rain gardens by visiting the following websites:

www.iowasudas.org
www.raingardens.org
www.mninter.net/~stack/rain/
www.lowimpactdevelopment.org
www.cwp.org
www.stormwatercenter.net